

I CLAIM:

1. A multi-stable magnetic article defining a plurality of spaced apart parallel magnetic axes, comprising:

(A) a first plate of non-magnetic material;

(B) a plurality of spaced apart first magnets disposed in said first plate for movement therewith;

(C) a second plate of non-magnetic material; and

(D) a plurality of spaced apart second magnets disposed in said second plate for movement therewith;

said first and second plates being generally juxtaposed and independently transformable in respective parallel planes transverse to the axes, between:

(i) a stable closed orientation wherein said first and second plates are essentially superposed, and wherein at least a plurality of said first magnets and at least a plurality of said second magnets form essentially superposed pairs, each said superposed pair containing one of said first magnets and one of said second magnets and defining one of said axes, and

(ii) a plurality of stable open orientations wherein said first and second plates are overlapping but essentially not superposed, and wherein said first and second magnets of at least one of said superposed pairs of magnets in said closed orientation are essentially not superposed in said open orientation;

in each of said superposed pairs, said first and second magnets being in the same magnetic orientation.

2. The article of Claim 1 wherein said first plate and said first magnets are readily manually separable from said second plate and said second magnets to deconstruct said article.

3. The article of Claim 2 wherein said first plate and said first magnets are readily manually attachable to said second plate and said second magnets to reconstitute said article.

4. A cosmetic case incorporating the article of Claim 1, said first plate defining a base of said case and said second plate defining a cover of said case, said base and cover being relatively transformable between said closed and open orientations.

5. The article of Claim 1 wherein the article is devoid of a physical pin connecting said first and second plates.

6. The article of Claim 1 wherein said first and second plates are relatively pivotable about at least one said axis to an additional stable open orientation.

7. The article of Claim 1 wherein the article is at least tristable.

8. The article of Claim 1 wherein the article is at least quadristable.

9. The article of Claim 1 wherein the article is at least pentastable.

10. The article of Claim 1 wherein adjacent facing surface of said first and second magnets are flush with or recessed relative to adjacent facing surfaces of said first and second plates, respectively.

11. The article of Claim 1 wherein there are three of said first magnets and three of said second magnets.

12. The article of Claim 1 wherein there are at least four of said first magnets and at least four of said second magnets.

13. The article of Claim 1 wherein at least one of said superposed pairs is in a different magnetic orientation than another of said superposed pairs.

14. The article of Claim 1 wherein in said closed orientation all of said first magnets and all of said second magnets form said superposed pairs.

15. The article of Claim 1 wherein one of said superposed pairs remains superposed throughout movement between adjacent orientations.

16. The article of Claim 1 wherein no superposed pair remains superposed throughout movement between adjacent orientations.

17. The article of Claim 1 wherein at least one superposed pair separates during movement between adjacent orientations.

18. The article of Claim 1 wherein at least one superposed pair separates during movement between adjacent orientations, with said first magnet thereof becoming newly superposed with another of said second magnets.

19. The article of Claim 1 wherein said non-magnetic material of at least one of said plates is transparent or translucent.

20. The article of Claim 1 wherein said first and second magnets are rectangular and substantially flat.

21. The article of Claim 1 wherein said plates are square in plan.
22. The article of Claim 1 wherein said plates are circular in plan.
23. The article of Claim 1 wherein said plates are oval in plan.
24. The article of Claim 1 wherein opposed major surfaces of each magnet are of opposite polarity.
25. The article of Claim 1 wherein each article axis is disposed inwardly of the peripheries of said first and second plates in said closed orientation.
26. The article of Claim 1 wherein said plates are square in plan, and said magnets are disposed adjacent respective corners thereof.
27. The article of Claim 26 wherein said magnets disposed in each plate are equidistantly spaced apart.
28. The article of Claim 1 wherein said magnets disposed in each plate define the vertices of a polygon, irrespective of the configuration of the plate.
29. The article of Claim 28 wherein said polygon is a regular polygon.
30. The article of Claim 1 wherein said first and second plates are transformable by being independently relatively pivotable about one of said magnetic axes.
31. The article of Claim 1 wherein said first and second plates are transformable by being independently relatively linearly translatable along orthogonal axes.

32. The article of Claim 1 wherein said first and second plates are transformable by being independently relatively linearly translatable along diagonal axes.

33. The article of Claim 1 wherein said plates are square in plan and there are eight of said first magnets and eight of said second magnets, four of each being disposed at respective corners of each plate and four of each being disposed at respective midpoints intermediate the corners of each plate.

34. The article of Claim 1 wherein said article is a cosmetic case and at least one of said plates carries at least two different cosmetics, each of the different cosmetics being individually and exclusively exposed for use by at least one respective stable open orientation.

35. The article of Claim 1 wherein said plates, including their respective magnets, are readily manually separable and readily manually attachable in the same or a different sequence of plates.

36. The article of Claim 1 wherein said first and second plates are square, and said first and second magnets are generally rectangular in plan and physically aligned along diagonals of said plates.

37. The article of Claim 1 wherein said first and second magnets are cylindrical.

38. A multi-stable magnetic article defining a plurality of spaced apart parallel magnetic axes comprising:

(A) a first article plate of non-magnetic material;

(B) a plurality of spaced apart first magnets disposed in said first plate for movement therewith;

(C) a second plate of non-magnetic material;

(D) a plurality of spaced apart second magnets disposed in said second plate for movement therewith; and

(E) a third plate of non-magnetic material; and

(F) a plurality of spaced apart third magnets disposed in said third plate for movement therewith;

said third plate and said third magnets being disposed at least partially intermediate said first and second plates and magnets;

said first, second and third plates being generally juxtaposed and independently transformable in respective parallel planes transverse to the axes, between:

(i) a stable closed orientation wherein said first, second and third plates are essentially superposed, and wherein at least a plurality of said first magnets, at least a plurality of said second magnets and at least a plurality of said third magnets form essentially superposed trios, each said superposed trio containing one of said first magnets, one of said second magnets and one of said third magnets and defining one of said axes, and

(ii) a plurality of stable open orientations wherein said first, second and third plates are overlapping but essentially not superposed, and wherein said first, second and third magnets of at least one of said

superposed trios of magnets in said closed orientation are essentially not superposed in said open orientation;

in each of said superposed trios, said first, second and third magnets being generally parallel and in the same magnetic orientation.

39. The article of Claim 38 wherein an outer one of said plates is transparent.